



USDA Foreign Agricultural Service

GAIN Report

Global Agriculture Information Network

Template Version 2.09

Voluntary Report - public distribution

Date: 7/8/2007

GAIN Report Number: ID7024

Indonesia

Fishery Products

Shrimp Report

2007

Approved by:

Elisa Wagner
U.S. Embassy

Prepared by:

Fahwani Y. Rangkuti

Report Highlights:

Shrimp farming production continues to grow while traditional shrimp catch production is decreasing. *Penaeus monodon* accounts for the largest share of production though *Penaeus vannamei* appears to overtake it. *Penaeus vannamei* is largely cultivated by semi-intensive and intensive farming. Indonesian shrimp producers are facing virus attacks that decrease production and antibiotic residues that result in restrictions by destination countries. Because shrimp comes from various sources, production can not be fully traced and standards are inconsistent.

Includes PSD Changes: No
Includes Trade Matrix: No
Unscheduled Report
Jakarta [ID1]
[ID]

TABLE OF CONTENTS

PRODUCTION	3
WILD CATCH PRODUCTION.....	3
SHRIMP FARMING.....	3
SEEDSTOCK.....	5
SHRIMP FEED	5
DISEASES	5
PROCESSING.....	5
POLICY.....	6
CONSUMPTION.....	6
TRADE	7
INVESTMENT	9
APPENDIX I: INDONES IAN SHRIMP IMPORTS	10
APPENDIX II: INDONESIAN SHRIMP EXPORTS	11
APPENDIX III: TARIFF RATE	13
APPENDIX IV: SHRIMP PRODUCTION	14

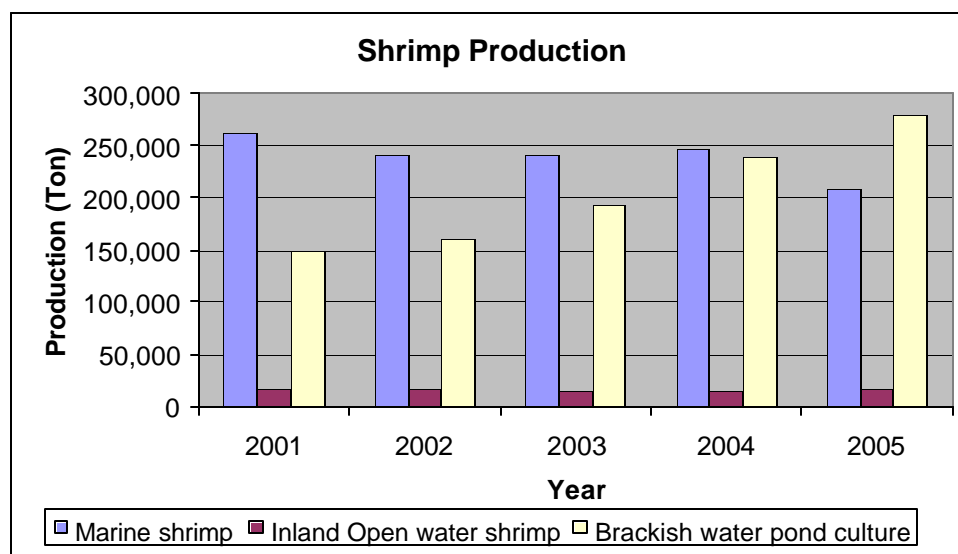
Indonesia as an archipelago surrounded by seas and oceans possessing a large potential supply of seafood products, including a variety of fish, shrimp, crab, and squid. Although seafood resources are relatively large, utilization of such resources has not been optimal. Marine accounts for the largest portion of seafood production and producers are fishermen using non-motorized boats and traditional techniques that do not have storage and freezing facilities. As a result, Indonesian production and quality do not always meet export market standards.

However, shrimp production is increasing due to the expansion of shrimp farms. Shrimp farms are typically low-lying impoundments along bays and tidal areas. Opportunities for shrimp products continue to grow with the increasing potential in export markets and the increase in the human population. Shrimp is becoming an alternative source of high quality animal protein in Indonesia.

Production

Wild Catch production

Prior to shrimp aquaculture development, which began in South Sulawesi in 1964, wild catch shrimp was the only source of shrimp production in Indonesia. In 2005, marine wild catch shrimp production was only 40 percent of total Indonesian shrimp production. While wild catch shrimp production is slowly decreasing, shrimp farm production is increasing.



Source: Ministry Marine Affairs and Fisheries-Directorate General of Capture & Directorate General of Aquaculture

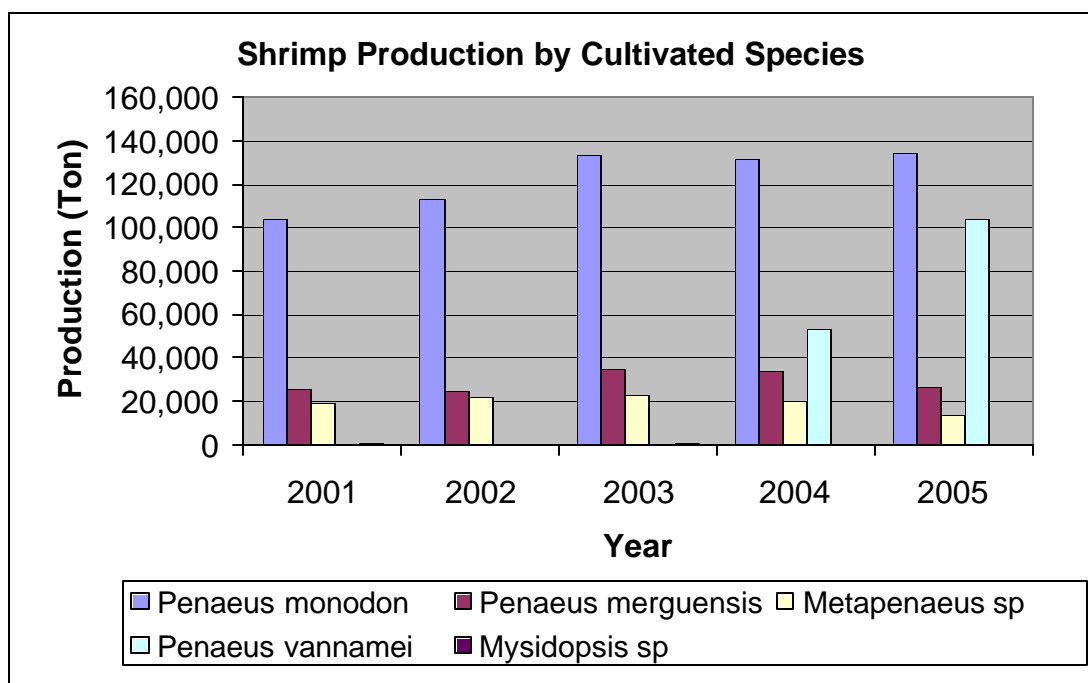
Shrimp farming

In 2005, shrimp-farming area was estimated to be 132,800 ha, with *Penaeus monodon* (P. monodon) accounting for 65 percent of total area and *Penaeus vannamei* (P. vannamei) accounting for 35 percent. The situation is expected to change in 2009. Total shrimp farming area will almost double. P. monodon shrimp farming will increase over 60 percent, but will only account for a little over half of total shrimp farming area. P. vannamei shrimp farming area will increase 160 percent, and account for 47 percent of total farm area. Integrated shrimp development is on eastern and central Java, southern and northern Sumatera, and western Kalimantan.

Currently, there are three types of shrimp farming in Indonesia; traditional or extensive farming, semi-intensive farming, and intensive farming. The farms are classified by the stocking density, the level of inputs, and the degree of management.

Traditional or extensive farms are owned by traditional farmers who cultivate their ponds with milk fish (poly cultures), whereas semi-intensive and intensive farms are owned by companies. These companies tend to produce three crops of shrimp per year and have their own hatchery and cold storage facilities. Intensive farms are usually integrated companies with facilities for breeding, hatching, farming, producing feed meal, shrimp processing, and exporting.

Both *P. monodon* (jumbo tiger prawn) and *P. merguensis* (white shrimp) were popular during 1964-2000. However since 2000, *P. vannamei* production is growing rapidly and is expected to outpace the other two in the next few years. It is typically cultivated on semi-intensive and intensive farms.



Source: Ministry Marine Affairs and Fisheries-Directorate General of Aquaculture

Though semi and intensive farms account for only 25 percent of total area used as shrimp farms, they account for about 60 percent of shrimp farming production and 80 percent of shrimp production for export.

The larger shrimp farms tend to be located in the coastal regions of northern and southern Sumatera; the island of Java; western, southern, and eastern Kalimantan; southern, southern-eastern, and central Sulawesi; and western Nusatenggara.

P. vannamei production increased five fold in five years between 2000 and 2005. However, the deterioration of seedstock quality due to inbreeding and nonstandard broodstock by small-scale hatcheries, degradation of ponds, water contamination, uncontrolled feed use, and disease outbreak are becoming obstacles to further increased production. Rather than import expensive broodstock, shrimp farmers prefer to produce broodstock locally, which has resulted in broodstock deterioration.

Seedstock

The Indonesian government (GOI) committed to encouraging shrimp production because of the high economic value and potential for export. GOI announced its 2006-2009 strategic plan for shrimp farming development with the goal of producing 540,000 tons of *P. vannamei* and *P. monodon* in 2009. To support the GOI goal, it will need 52 billion of seedstock (9.7 billion for *P. monodon* and 42.5 billion for *P. vannamei* production) in 2009. However to meet with this goal, 600,000 imported and locally produced SPF (Specific Pathogen Free) broodstock and 300,000 locally SPR (Specific Pathogen Resistance) broodstock will be needed.

Currently, seedstock is supplied by both large-scale and small-scale hatcheries. The total number of shrimp hatcheries is 810 (521 small-scale hatcheries, 264 private companies hatcheries, and 25 government hatcheries). Some of the broodstock is imported from Hawaii and Florida. To reduce its dependence on shrimp broodstock imports, breeding centers are being developed on the islands of Sulawesi, Java, and Sumatera.

Shrimp feed

In 2005, shrimp feed mill capacity was 450,000 tons/year. Estimated sales during 2005 were 240,000 tons, which excludes feed produced by integrated farms. Shrimp feed is produced by 20 shrimp feed mills in 6 provinces throughout Indonesia.

To meet GOI 2009 targets, an additional 128,000 tons of shrimp feed will be needed. Total demand will be 182,000 tons of shrimp feed for *P. monodon* production and 395,000 tons of shrimp feed for *P. vannamei* production. Indonesian Shrimp Feed Association forecasts that imports of fishmeal, much of it used in shrimp feeds, will reach 850,000 tons in 2007, up 21 percent from an estimated 700,000 tons in 2006. Feed can represent over 50 percent of the production cost in intensive shrimp farming in Indonesia.

Diseases

Viral infections are decreasing production. Residue from antibiotics being used by farmers to combat problems has resulted in trade restrictions in export markets.

White Spot Syndrome Virus (WSSV) and Taura Syndrome Virus (TSV) are the most common diseases for *P. vannamei*. However, Infectious Myonecrosis Virus (IMNV) was recently found in Indonesia. Virus outbreaks have been attributed to the lack of good shrimp cultivation practices by farmers.

Processing

In most cases, fishermen and traditional shrimp farmers do not have access to a wide range of potential buyers and processors, and cold storage. Most bring their wild catch and shrimp from the farm to the closest processor, where the production is also stored, in a plastic drum layered with ice or have private traders, collectors, or agents market their products. Local collectors will market the shrimp from the production site to processing plants, supermarkets, and other institutions. Collectors often come from the local village and pass on the raw materials to regional collectors. Collectors often provide loans to shrimp farmers to ensure the farmers remain loyal to them.

Throughout Indonesia, there are 443 cold storage facilities that process fish and shrimp with a total capacity of 64,000 tons. About one-fourth specialize in shrimp processing. This

represents a drop in the number of fish and shrimp processors due to small margins and limited supply.

Cold storage facilities that meet GOI requirements are provided an Approval Number. Laboratories in the facilities test the processed shrimp to determine that the shrimp meets GOI health requirements. In 2005, there were 14 laboratories throughout Indonesia equipped with PCR tasting capability, with 6 also having ELISA testing capability. In addition, the European Union provided 3 units of LCMSMS equipment (Liquid Chromatography/Mass Spectrometry/Mass Spectrometry) for use in GOI laboratories to determine Nitrofurantoin derivative residue in shrimp products for export. The antibiotic and hazardous chemical contamination found in Indonesian shrimp to the European Union is thought to come from shrimp seedstock which originated from small hatcheries and from shrimp feed.

To address export market trade restrictions due to antibiotic and pesticide use, GOI is introducing farmers to bio security practices.

Policy

In 2007, GOI announced that income tax incentives would be provided to shrimp catchers and processors in the provinces adjacent to the Indian Ocean in order to support the expansion of the shrimp industry.

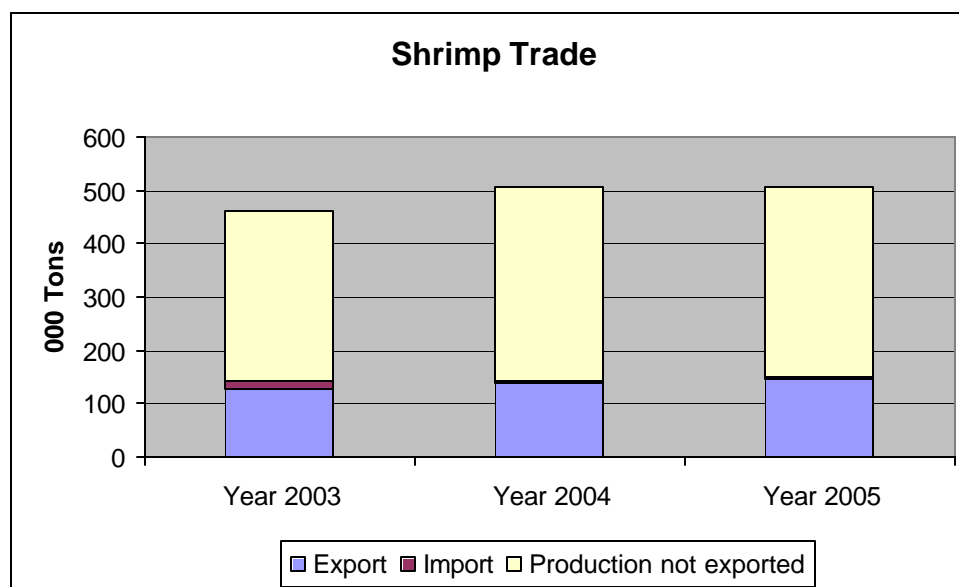
To maintain shrimp population size, GOI restricts marine shrimp fishing to BED Equipped Shrimp Net, Double-rigged Shrimp Trawls, Demersal Danish Seine, and Portable Traps.

For traditional fishermen, fuel costs account for 60 percent of fishing operation costs. In 2006 GOI announced a fuel subsidy for boats to support fishermen. The subsidy covers up to 25 kiloliters of fuel per month per boat not to exceed 2 million kiloliters per year.

GOI hopes to increase the production quality of fish aquaculture, including shrimp for export, while keeping the price of seedstock at lower levels by providing a subsidy on aquaculture certified seedstock produced by the government and small-scale hatcheries. Ministry of Finance regulation No. 76/PMK.02/2006 dated September 13, 2006 stated that the price of subsidized *P. monodon* seedstock is Rp.10/head and *P. vannamei* is Rp. 20/head.

Consumption

Indonesia does not significantly import shrimp products. Consumption is supplied by local shrimp production. High-end hotels and restaurants are the only consumers of certain kinds of imported shrimp products.



Trade

Fresh shrimp caught by traditional fishermen may be directly consumed, distributed by wholesalers to retailers or other institutions, or directly distributed to cold storage facilities. Cold storages tend to be located near sea-ports and export most of their product. Small-scale and medium-scale farmers usually maintain close links with cold storage companies. Larger firms process the shrimp or have it processed by an affiliated company for distribution to the local or export markets.

Seafood products, including shrimp, were the fourth largest agricultural export for Indonesia behind vegetable oil, rubber, and wood products in 2005. Export of shrimp products steadily increased during the period of 2003-2006 and was exported in the form of whole, shell-on, raw, frozen; whole, head-on, shell-on, cooked, frozen; and headless, shell-on, raw, frozen, headless, peeled, and deveined or deveined. The size which is offered for *P. monodon* and *P. vannamei* are 8/12, 13/15, 16/20, 21/25, 26/30, 31/40, 41/50, 51/60, 71/90; and plus 71/90 for *P. merguensis*.

In 2006, Indonesia was the third largest supplier of frozen shrimp and prepared shrimp to the United States. In that same year, Indonesia was the second largest supplier of frozen shrimp and the fourth largest supplier of prepared and preserved shrimp to Japan.

The Japanese market mostly prefers *P. monodon* and to a lesser extent *P. vannamei*, the European market prefers both *P. monodon* and *P. vannamei*, while the U.S. market mostly prefers *P. vannamei* and to a lesser extent to *P. monodon*.

Import Trade Matrix			
Country	Indonesia		
Commodity	Shrimp		
Time Period	Jan-Dec	Units	MT
Imports from	2005		2006
U.S.	90	U.S.	123
Others		Others	
Indonesia	730	Indonesia	414
China	277	Netherlands	303
Myanmar	115	Thailand	21
Malaysia	80	South Africa	13
Singapore	26	Taiwan	9
India	25	Singapore	7
Thailand	19		
Others not listed	25	Others not listed	6
Total for Others	1,297	Total for Others	773
Grand Total	1,387	Grand Total	896

Source: Global Trade Atlas

Export Trade Matrix			
Country	Indonesia		
Commodity	Shrimp		
Time Period	Jan-Dec	Units	MT
Export to	2005		2006
U.S.	48,623	U.S.	60,005
Others		Others	
Japan	44,880	Japan	49,734
Belgium	10,886	Belgium	12,696
United Kingdom	6,767	United Kingdom	9,753
Thailand	5,450	Hongkong	5,187
Hongkong	4,992	Thailand	5,017
Malaysia	4,288	Malaysia	4,089
China	3,245	Singapore	2,550
Singapore	2,725	China	2,550
France	2,203	Germany	2,050
Canada	1,858	Italy	1,870
Germany	1,597	Australia	1,730
Italy	1,579	Netherlands	1,493
Netherlands	1,578	France	1,294
Australia	1,300		
Taiwan	1,031		
Spain	1,005		
Total for Others Listed	95,384	Total for Others Listed	100,013
Others not listed	3,651	Others not listed	5,822
Grand Total	147,658	Grand Total	165,840

Source: Global Trade Atlas

Indonesian shrimp to Japan and the European Union has faced restrictions because of antibiotic residues. Japan limited antibiotic residue to 1 ppb since September 2006. Shrimp with Chloramphenicol and Nitrofurantoin content are not allowed to enter the European Union, United States, and Japan.

Indonesia banned shrimp imports in 2004 to halt transshipments of shrimp and to limit diseases. The ban was first implemented in December 2004 and is currently being renewed every 6 months. The latest regulation dated June 29, 2007 prohibits imports of frozen and unfrozen *P. monodon* and *P. styrostris*.

Shrimp currently prohibited from being imported to Indonesia:

HS Number	Description of Goods
0306.13.00.00	- Frozen - Small shrimp, and shrimp of <i>Penaeus vanamae</i>
0306.23	- Unfrozen, fresh - Small shrimp and shrimp of <i>Penaeus vanamae</i>
0306.23.30.00	- Fresh or chilled

Based on Government Regulation No. 7/2007, fresh or frozen, whole, headless shrimp are exempted from the 10 percent value added tax. Import duties and value added taxes are provided in Appendix.

Investment

Recently, one multinational company with fully integrated shrimp operations bought out the largest shrimp farm company in Indonesia. The former company operated under the traditional Indonesian concept of a "nucleus" managed by the company's interests which also processes product from and provides support to nearby small holder farmers. This acquisition should result in the largest farm in Indonesia producing export quality shrimp.

APPENDIX I: Indonesian Shrimp Imports

HS Code	Description	Total Import							
		2003		2004		2005		2006	
		\$	Ton	\$	Ton	\$	Ton	\$	Ton
030611000	Frozen Rock Lobster & Other Sea Crawfish	4,062	1	851	0	3,840	1	84,923	13
030612000	Frozen Lobster	18,402	5	9,303	7	1,621	0	21,774	3
030613000	Frozen Shrimp and Prawns	9,888,611	2,597	52,826,976	12,360	3,353,516		2,289,904	695
030621900	Rock Lobster & Other Sea Crawfish Other Than in Airtight Containers	58,885	6	241,699	8	35,808	2	7,741	1
030622100	Lobster in Airtight Container	106,444	7	0	0	0	0	266	0
030622900	Lobster Other Than in Airtight Containers	0	0	25,828	1	0	0	4,972	0
030623900	Shrimp and Prawns Other Than in Airtight Containers	430,034	23	467,271	62	1,656,858	591	968,077	161
160520000	Shrimps and Prawns Prepared or Preserved	207,316	11	276,992	66	54,160	37	123,873	23

Source: Global Trade Atlas

Country Of Origin

HS Code	Country of Origin (volume)			
	2003	2004	2005	2006
030611000	United States 100%	United States	India	South Africa 100%
030612000	United States 40% Indonesia* 20% Malaysia 20%	Singapore 86% Thailand 14%	Singapore 100%	Indonesia* 100%
030613000	Malaysia 27% Singapore 18% China 11% Indonesia* 8% Greenland 7% Thailand 6% Myanmar 6% India 4%	China 63% Malaysia 8% Thailand 7% India 7% Myanmar 7% Indonesia* %	Indonesia China Myanmar Malaysia	Indonesia* 45% Netherlands 44% United States 12%
030621900	Indonesia 67% United States 17%	United States 100%	United States 100%	Australia 100%
030622100	United States 100%	-	-	Singapore 100%
030622900	-	United States 100%	-	Australia 100%
030623900	United States 83% Thailand 13% Taiwan 4%	United States 47% Malaysia 26% Myanmar 24%	Indonesia * 83% United States 10% Myanmar 5%	Indonesia * 54% United States 25% Thailand 13%
160520000	Singapore 64% China 27%	Indonesia* 67% Singapore 23%	China 38% Singapore 30%	Indonesia 61% Singapore 30%

Source: Global Trade Atlas

* Product originated from Batam, one of Indonesian island near Singapore which has been declared as bonded zone area, is acknowledged as an imported product from one specific country/area.

APPENDIX II: Indonesian Shrimp Exports

HS Code	Description	Total Export							
		2003		2004		2005		2006	
		\$	Ton	\$	Ton	\$	Ton	\$	Ton
030611000	Frozen Rock Lobster & Other Sea Crawfish	9,603,744	2,459	2,170,150	670	413,139	115	1,890,593	259
030612000	Frozen Lobster	2,936,320	433	1,477,260	274	233,392	52	1,426,765	406
030613000	Frozen Shrimp and Prawns	785,856,284	115,857	770,317,263	114,059	804,022,736	121,328	939,711,381	135,388
030621100	Rock Lobster & Other Sea Crawfish in Airtight Containers	1,175,074	229	184,902	57	58,126	5	8,218	5
030621900	Rock Lobster & Other Sea Crawfish Other Than in Airtight Containers	1,424,129	671	3,087,593	883	2,952,476	976	6,088,433	1,818
030622100	Lobster in Airtight Containers	350,135	82	1,894,016	634	672,966	317	232,477	204
030622900	Lobster Other Than in Airtight Containers	3,423,574	1,329	4,703,947	976	4,591,009	1,056	7,100,051	1,363
030623100	Shrimp and Prawns in Airtight Containers	303,876	165	234,457	148	60,682	17	1,427	4
030623900	Shrimp and Prawns Other Than in Airtight Containers	2,670,186	4,334	3,206,369	3,916	2,496,444	3,106	4,285,498	3,038
160520000	Shrimp and Prawns Prepared or Preserved	297,713	2,295	73,598,567	12,358	112,614,171	20,656	142,721,431	23,377

Source: Global Trade Atlas

Destination Country

HS Code	Country of Destination (volume)			
	2003	2004	2005	2006
030611000	Belgium 34% Spain 27% Japan 11% Hong Kong 8% United States %	Belgium 33% Taiwan 22% Malaysia 12% Japan 11%	Malaysia 32% Singapore 28% Canada 15% Belgium 13%	Japan 39% Belgium 15% Australia 15% Singapore 12% Hong Kong 9%
030612000	Japan 62% Taiwan 19% Australia 10%	Australia 27% United States 18% Japan 16% Taiwan 14% Belgium 11%	Australia 23% United Kingdom 21% Hong Kong 19% Japan 19%	Singapore 63% Australia 11% United States 11% Japan 9%
030613000	Japan 49% United States 17% Belgium 7% Hong Kong 4% United Kingdom 4%	Japan 41% United States 28% Belgium 7% United Kingdom 4%	Japan 36% United States 32% Belgium 8% United Kingdom 5%	Japan 36% United States 34% Belgium 8% United Kingdom 6%

030621100	Taiwan 48% Hong Kong 35% Malaysia 12%	Malaysia 49% Taiwan 37%	Japan 80%	Malaysia 100%
030621900	Malaysia 60% Singapore 32%	Malaysia 46% Singapore 20% Taiwan 12% Hong Kong 12%	Malaysia 39% Taiwan 21% Singapore 19% Hong Kong 13% Japan 6%	Singapore 28% Malaysia 25% Japan 20% Taiwan 12% Hong Kong 11%
030622100	Hong Kong 73% Australia 12%	Hong Kong 79% China 8% Australia 5% South Korea 4%	Hong Kong 67% China 13% Singapore 7%	Malaysia 81% Singapore 18%
030622900	Hong Kong 76% South Korea 9% Singapore 6%	Hong Kong 82% Taiwan 11%	Hong Kong 66% Taiwan 32%	Hong Kong 71% Taiwan 27%
030623100	Belgium 30% Thailand 25% France 24% Malaysia 17%	Malaysia 45% France 26% Belgium 13% United Kingdom 12%	United Kingdom 100%	Malaysia 100%
030623900	Malaysia 78% Singapore 19%	Malaysia 81% Singapore 6% Taiwan 4% Japan 3%	Malaysia 83% Singapore 6% Belgium 4%	Malaysia 73% Singapore 9% United States 5%
160520000	Thailand 99%	United States 62% Thailand 14% Belgium 5% Malaysia 4 %	United States 50% Thailand 25% Belgium 6%	United States 60% Thailand 17% Belgium 6% United Kingdom 5%

Source: Global Trade Atlas

APPENDIX III: Tariff Rate

HS Code	Description	Import Duty	VAT	Luxury Tax
Frozen				
0306.11.00.00	Rock lobster and other sea crawfish (Palinurus spp, Panulirus spp, Jasus spp)	5	10	-
0306.12.00.00	Lobster (homarus spp)	5	10	-
0306.13.00.00	Shrimp and prawns	5	0	-
Not frozen				
0306.21	Rock lobster and other sea crawfish (Palinurus spp, Panulirus spp, Jasus spp)			
0306.21.10.00	Breeding	0	10	-
0306.21.20.00	Other, live	5	10	-
0306.21.30.00	Fresh or chilled	5	10	-
0306.21.91.00	Other In airtight containers	5	10	-
0206.21.99.00	Other	5	10	-
0306.22	Lobster (homarus spp)			
0306.22.10.00	Breeding	0	10	-
0306.22.20.00	Other, live	5	10	-
0306.22.30.00	Fresh or chilled	5	10	-
0306.22.41.00	Dried in airtight containers	5	10	-
0306.22.49.00	Other	5	10	-
0306.22.91.00	Other in airtight containers	5	10	-
0306.22.99.00	Other	5	10	-
0306.23	Shrimp and prawns			
0306.23.10.00	Breeding	0	0	-
0306.23.20.00	Other, live	5	0	-
0306.23.30.00	Fresh or chilled	5	0	-
0306.23.41.00	Dried, in airtight containers	5	0	-
0306.23.49.00	Other	5	0	-
0306.23.91.00	Other in airtight containers	5	0	-
0306.23.99.00	Other	5	0	-
1605.20	Shrimp and prawns			
	Shrimp paste			
1605.20.11.00	In airtight containers	5	10	
1605.20.19.00	Other	5	10	
	Other			
1605.20.91.00	In airtight containers	5	10	
1605.20.99.00	Other	5	10	

APPENDIX IV: Shrimp Production

Marine shrimp production (T)

Species	2001	2002	2003	2004	2005
Endeavour/Shrimp bluetail endeavour prawn/Shrimp red greasib	36,358	33,570	34,178	38,438	31,506
Banana prawn/White shrimp/Indian banana	65,269	69,508	66,501	68,699	61,950
Tiger cat shrimp/Rainbow shrimp	-	-	-	2,763	6,456
King/Blue legged prawn	-	-	-	134	126
Jumbo/Giant/Blue/Brown tiger prawn	43,759	38,088	34,190	34,533	30,380
Spiny lobster	4,490	4,758	5,348	5,439	6,648
Other shrimp	113,161	95,561	100,221	95,907	71,473
Total	263,037	241,485	240,438	245,913	208,539

Source: Ministry Marine Affairs and Fisheries-Directorate General of Capture Fisheries

Inland open water shrimp production (T)

Species	2001	2002	2003	2004	2005
Athyds	337	194	737	334	366
Giants freshwater prawn	5,185	4,685	4,947	4,646	8,408
Fresh water shrimp	3, 898	5,115	4,013	3,790	2,892
Other shrimp	7,721	5,611	5,653	5,540	5,000
Total	17,141	15,605	15,350	14,310	16,666

Source: Ministry Marine Affairs and Fisheries-Directorate General of Capture Fisheries

Brackish water pond culture production

Species	Production (T)				
	2001	2002	2003	2004	2005
Black tiger shrimp	103,603	112,840	133,636	131,399	134,686
White shrimp	25,862	24,708	35,249	33,797	27,088
Metapenaeus shrimp	19,093	21,634	22,881	19,929	13,731
Metapenaeus Vannamei	-	-	-	53,217	103,874
Mysids	610	415	700	226	164
Total	149,168	159,597	192,466	238,568	279,543

Source: Ministry Marine Affairs and Fisheries-Directorate General of Aquaculture

Brackish water pond culture production by species and Province in 2005

Province	Production in 2005 (T)				
	Black tiger shrimp	White shrimp	Metapenaeus shrimp	Metapenaeus Vannamei	Mysids
Sumatera	61,822	2,801	609	94,708	11
Java	29,306	19,839	10,433	1,782	153
Bali-Nusa Tenggara	1,200	536	18	5,183	-
Kalimantan	9,284	3,489	45	1,489	-
Sulawesi	32,611	406	2,626	712	-
Maluku-Papua	459	17	-	-	-
Total	134,682	27,088	13,731	103,874	164

Source: Ministry Marine Affairs and Fisheries-Directorate General of Aquaculture